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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,350	03/25/2004	Yukio Taniyama	1080.1137	5459
21171	7590	03/13/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			CHOI, WOO H	
			ART UNIT	PAPER NUMBER
			2189	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,350

Applicant(s)

TANIYAMA, YUKIO

Examiner

Woo H. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/25/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US Patent No. 6,260,006, hereinafter "Wong") in view of Chan et al. (US Patent No. 6,775,087, hereinafter "Chan").

Wong discloses, a magnetic tape unit to which a cartridge accommodating a magnetic tape is detachably attached and which accesses the magnetic tape in accordance with an access request from a host, wherein the cartridge accommodates the magnetic tape, the magnetic tape unit (figure 3) comprising:

a magnetic tape drive which accesses the magnetic tape;

a memory read/writer; and

an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes (figure 2) using the memory read/writer, and in which based on the management information, a LOAD command of the cartridge from the host is replaced by a command for accessing a region corresponding to a volume of a virtual cartridge which receives the LOAD command from the host in the magnetic tape accommodated in an actual cartridge loaded in this magnetic tape unit, the access-controlling section allowing the

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magnetic tape drive to access the magnetic tape accommodated in the actual cartridge (col. 2, lines 24 – 37, col. 7, lines 13 – 22, and figures 5 and 6, commands from the host computer to access a specified tape volume is replaced with a series of internal command to present a virtual tape volume to the requesting host).

However, Wong does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information manner (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Wong and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape cartridge of Wong, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

3. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayoma (US Patent No. 5,940,849) in view of Chan et al. (US Patent No. 6,775,087, hereinafter “Chan”).

4. With respect to claims 1 and 2, Kayoma discloses a magnetic tape unit to which a cartridge accommodating a magnetic tape is detachably attached and which accesses the magnetic tape in accordance with an access request from a host, wherein the cartridge accommodates the magnetic tape, the magnetic tape unit (figure 11) comprising:

a magnetic tape drive which accesses the magnetic tape;

a memory read/writer; and

an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes using the memory read/writer, and in which based on the management information, a LOAD command of the cartridge from the host is replaced by a command for accessing a region corresponding to a volume of a virtual cartridge which receives the LOAD command from the host in the magnetic tape accommodated in an actual cartridge loaded in this magnetic tape unit, the access-controlling section allowing the magnetic tape drive to access the magnetic tape accommodated in the actual cartridge (abstract, col. 3, lines 15 – 21, and figure 6, a tape cartridge contains multiple volumes with each logical volume recognized as physical volume would need to translate commands to individual physical volumes containing a single volume to internal commands appropriate to access multiple logical volumes in a single tape cartridge),

wherein the access-controlling section remains a state in which the magnetic tape is loaded in the actual cartridge in accordance with an UNLOAD command of the cartridge from the host, and the access-controlling section brings this state into a state in which the actual cartridge can be taken out in accordance with an EJECT command from the host (figure 15).

However, Kayoma does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable manner. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Kayoma and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape

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cartridge of Kayoma, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

5. With respect to claim 3 see figure 15.

6. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata et al. (US Patent No. 5,327,535) in view of Chan et al. (US Patent No. 6,775,087, hereinafter “Chan”).

Ogata disclose a magnetic tape storage system with a plurality of virtual volumes on a single tape medium similar to Wong and Kayama’s systems discussed above. However, like Wong and Kayama, Ogata does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable manner. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Ogata and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape cartridge of Ogata, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

Handling of load and unload commands are shown in figures 5, 7, 18 and 18 of Ogata’s disclosure.

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*Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Woo H. Choi  
March 6, 2006